1: Titiev E-5 (1948) 1951 SG4 Araucanians SG4
Mapuche-Huilliche

If one can accept the accuracy of a letter of Pedro de Valdivia, which contains what is probably the first "description of the Araucanians ever penned,"[3] the Indians were already good husbandmen in the mid-sixteenth century. Valdivia referred to their rich flocks, "with wool that drags along the ground," and to the numerous foods that they "sow for their livelihood, such as maize, potatoes, quinua [*quinoa?*], madi [*mani?*], pepper, and beans. . . ."[4]

Even in the days when they were almost incessantly at war with Spaniards or Chileans, the Araucanians derived much of their sustenance from the soil. Their homeland afforded a few game animals and a number of wild fowl, but they lived primarily on a vegetarian diet. They ate many wild plants, tubers, nuts, and fruits, but they also raised crops of corn, wheat, and potatoes, together with garden products, such as peppers and onions.[5] Farming was left almost entirely to women, and intensive agriculture was seldom attempted. Land was cleared and utilized as occasion demanded, but there was no effort to improve the soil and no great concern over the exact locations and limits of land holdings.

LAND OWNERSHIP

In the Spanish period small units of kindred, whose precise composition is unknown, claimed rights of possession to the areas they occupied. Apparently, the head of a putative kin group held some sort of title on behalf of the entire unit and assigned particular plots for the use of his followers. Ownership applied only to usufruct, for it seems to have been the rule that land itself could neither be sold nor alienated. According to McBride: "It is even doubtful if any fixed practice of inheriting individual holdings had become established, though probably a family remained in possession as long as it desired."[6]

[3] Graham, 1927, p. 100.

[4] *Ibid.* It must be remembered that Valdivia sometimes exaggerated Chile's resources in order to attract followers.

[5] For further information on these topics, consult Latcham, 1909, pp. 340–41; Guevara, 1929, II: 288–330; and Moesbach, 1930, pp. 74–122.

[6] McBride, 1936, p. 309.

1: Titiev E-5 (1948) 1951 SG4 Araucanians SG4
Mapuche-Huilliche

for money, and comparatively little corn is grown. Plowing, harrowing, and similar tasks are done with conventional Spanish-Chilean tools, and the pattern of successive farming operations is the same throughout the countryside. Oxen are the favorite draught animals, and horses are rarely used for agricultural tasks.

The ideal system of land utilization throughout this part of Chile calls for a rotation of fields, whereby each plot can be left fallow after several years of use. When agricultural activities commence in the spring, preliminary plowing takes place if the soil is moist, but if the land is dry it is broken up with the aid of a toothed harrow. Before planting, a field is subjected to two more plowings, at right angles to each other, after which it is smoothed over with an improvised sort of drag, made by affixing tree branches to a harrow (Pl. I, Fig.2). Guide lines are then cut across the field at intervals of about ten feet, and as each section is seeded, it is lightly covered with soil. It must be understood, of course, that few Araucanians and not all Chileans take the trouble, or have the resources, to follow the ideal pattern.

Every Mapuche strives to sow at least six hectares of wheat. Thereafter, the principal crops consist of barley, oats, beans, peas, and potatoes. Onions, leeks, and chili peppers are grown in garden plots, most often by women, for use as condiments. Wild strawberries and other fruits are picked where available, and apple orchards are being planted in increasing numbers. Many families augment their food supplies by raising chickens and pigs; and a few enterprising souls keep turkeys, ducks, and geese. The average householder also has a yoke of work oxen, two or three all-purpose horses, and several dogs. Except for those who are destitute, each family maintains a small flock of about two dozen sheep. Excess lambs are generally sold for cash. Sheep are sheared in the spring, and the wool is spun and woven into rugs or garments by women.

A provident farmer plans to divide his yield into three parts. One is for the use of his family, a second is put aside for seed, and the third is used for paying debts or for cash sale.[18]

[18] In good years a farm will return as much as ten units of produce for every unit of seed sown. In bad years the proportion may fall as low as three

4:Latcham F-5 (1888-1893) 1909 SG4 Araucanians SG4

From a plant called *madi* they obtain a sweet oil, considerably used in their cooking. 262 252

The immense forests supply them with innumerable fruits and berries, used both for food and for the manufacture of fermented liquors, and also with edible fungi which form a favourite article of diet. The open plains provide them with the wild strawberry (*fragaria chilensis*), small but of exquisite flavour. This plant frequently covers square leagues of ground, but never grows except on virgin soil. But the great staple food, the base of all their subsistence, save among the coast tribes, was the *piñon*, the fruit of the Araucanian pine (*Araucaria imbricata*). 262 222 [137] [137]

Every year during the autumn months excursions are made by the whole tribe to the pine forests, where they remain until they have collected sufficient for the following year. Each tribe has its own district, inherited by custom from generation to generation and inviolate, by unwritten law, from other tribes, even in time of warfare. [423]

This harvest was formerly of such supreme importance, that all inter-tribal quarrels and warfares were suspended by mutual accord during this period. [726]

The Araucano had always a good supply of flesh and fowl, especially the latter. Among the wild animals used for food were the *huemul* (*cervus chilensis*), the *pudu* (*cervus pudu*), the guanaco, and the *pangi* (*felis concolor*). 224 136

The birds were more numerous and included the *rudu* or partridge, pigeons, doves, parrots, numerous kinds of duck, *bandurria*, *payuca* or wild geese, wild swans, plover, etc. The coast tribes lived principally on fish and various kinds of shellfish. 223 136

In modern times they have cultivated maize and *frejoles* (beans), introduced by the Incas, wheat, barley, rye, potatoes and other crops, while their food supply has been greatly increased by the introduction of horses, cattle, sheep, pigs, and poultry. 241 231

To this abundance of comestibles is to be ascribed the warlike tendencies of these Indians, who not having to give much heed to their food supply, the fertile soil producing it spontaneously almost everywhere, could indulge freely in the luxury of continual warfare. This also gave them an enormous advantage over the Spaniards in their long campaigns, as the latter were almost entirely dependent on their baggage trains or provision supplies, while the surrounding country catered to the wants of their indomitable foes. 721

As a condiment they use the *ají* or Chile pepper; salt was obtained from the numerous saline deposits found throughout the country, while flavour was given to their dishes by the employment of wild thyme and wild mint. 263

Their food is usually cooked in earthenware pots, but many kinds of flesh are roasted, or broiled. 252

The cooking is done by the women, each wife cooking for her own family and taking it in turns to cook for the husband. Each wife has her own fire and cooking utensils.

5:Cooper E-4 (no date) 1946 SG4 Araucanians SG4

222 137 **Wild plant foods.**—Of the noncultivated plant foods, the most important was piñons, the seeds of the Chilean pine (*Araucaria imbricata*) which grows in the Nahuelbuta coastal range as well as in the main Andean Cordillera. The natives came from considerable distances to gather the piñons in season. The number of distinct species of wild plants exploited, a good many of them intensively, as food sources was very large, totaling probably a good 75 to 100. One *Mapuche* alone, Coña, lists nearly 50 (Moesbach, 1936, pp. 30–31, 87–106). These included: Roots, and tubers—ñuto (*Alstroemeria ligtu*), lâwü (*Sisyrinchium* sp.), huanqui (*Dioscorea* sp.), gadu (*Conanthera bifolia*), and others; rhizomes of a fern, añpe (*Alsophila quadripinnata*); fruits and berries—myrtle (*Myrtus ugni*, *M. luna*, and others), "barberry" (*Berberis darwinii*, *B. congestifolia*, and others), boldo (*Boldoa fragrans* or *Peumus boldus*), peumo (*Cryptocarya rubra*), maqui (*Aristotelia maqui*), kopiu (*Lapageria rosea*), kowüll (*Lardizabala biternata*), doka (*Mesembryanthemum chilense*), mulul (*Ribes glandulosum*), nüyu (*Greigia sphacelata*), mulluen (*Empetrum rubrum*), apples (feral: post-Columbian, of course), and others; "hazelnuts" (*Guevina avellana*); seeds—llenque (*Podocarpus andina*), and lanco, lanko (*Bromus stamineus*, or *B. unioloides*); ŋalka, petioles of paŋke (*Gunnera scabra* or *G. chilensis*); leaves and greens—graciola (*Gratiola peruviana*), placa (*Mimulus luteus*) (in Moesbach, 1936, p. 100, leaves eaten as Europeans eat salad); many species of mushrooms; algae (seaweeds)—*Durvillaea utilis* (giant kelp), *Ulva lactuca* (sea-lettuce), *U. latissima*. Coña (in Moesbach, 1936, p. 30) lists as scarcity foods resorted to after the crop-foods were exhausted, in addition to ŋalka and añpe above-mentioned, the following, some of which are of Old World origin, but without giving details: Yuyo (*Brassica campestris*), yerba mora (*Solanum nigrum*), yerba buena (*Mentha pulegium*, *M. viridis*), cardo, troltro (apparently *Silybum marianum*, *Cynara cardunculus*).

146 In view of the great number and variety of cultivated and wild plant foods used by the *Araucanians* in the past, their plant dietary probably provided them with an adequate supply of the essential mineral and vitamin nutrients. The chief lack, from our point of view, is in green-leaf vegetables. As regards quantity, it would seem [261] from our sources that the *Araucanians* usually enjoyed food sufficiency, if not abundance: there were seasons of relative scarcity, but there is little indication of recurrent or even occasional famines proper.

224 **Hunting.**—Hunting and trapping seem to have played a very minor role in *Mapuche-Huilliche* economy, to judge from rare statements such as those of Molina (1901, p. 124) and Coña (in Moesbach, 1936, p. 36), and from the scant attention given to the subject in our many earlier extensive first-hand accounts of *Araucanian* culture. Four-footed game appears to have been relatively scarce in the southern

5:Cooper E-4 (no date) 1946 SG4 Araucanians SG4
Pehuenche

repeated almost word for word by Rosales (1877–78, 1:223, 468)—and which they stored in a manner to last 4 or 5 years. Whether they practiced any agriculture in Mariño de Lovera's time is uncertain from his account, while Rosales' two statements are not easily harmonized: "no cuidan de sembrar" (1:468), and "cogen sus trigos y zebadas [European? or the native *Araucanian* "cebada"?] con abundancia los Pegüenches, aunque son poco labradores y con muy poco que siembran se contentan" (1:192). Pietas (1846, pp. 499, 500) seems to imply that horticulture was absent. For the rest, climatic conditions in the upper Andes were not favorable to gardening.

The weapons used were the bow and arrow, and the bolas (Pietas, 1846, p. 499).

Dwellings were of hides of horses and cattle.

Rosales (1877–78, 1:198) alone records the use of a type of snowshoes made of "coleos" (*Chusquea* sp. probably) to prevent sinking in the deep snow, but gives no details on construction—the only occurrence of snowshoes reported for South America, to the writer's knowledge, except the *Ona* one.

Each *Pehuenche*, according to Rosales (1877–78, 1:197; see also Pietas, 1846, p. 500), had exclusive and hereditary rights to gather piñons in a given district—held, added Pietas, just as the Spaniards hold their own vineyards.

In the middle of the 18th century, the culture of the "*Pehuenche*" between lat. 34° and 37° S. was fundamentally like *Mapuche-Huilliche*, as is clear from Molina; still earlier in the same century, Pietas stated (1846, p. 499) that the "*Pehuenche*" farther south had "los mismos ritos y costumbres" as the *Huilliche*; for all we know, even in the 16th and 17th centuries, the culture of the *Pegüenche* of Rosales and of the piñon-eating mountaineers of Mariño de Lovera, apart from the few reported minor differences we have listed and, presumably, other nonreported ones, may have been fundamentally in conformity with the culture of the *Mapuche-Huilliche*. At any rate, we have no tangible evidence of fundamental difference of pattern.

BIBLIOGRAPHY

For bibliographic references on the *Mapuche-Huilliche*, see page 699; on the *Picunche*, page 755; on the Argentine *Araucanians*, pages 755–756; and on the *Puelnenche*, page 759.

10: Hilger E-5 (1946-1952) 1957
SG4 Araucanians SG4
Chile

The author of the above summary comes to the conclusion that the legal problem to be dealt with should be one of "reforming" the ancestral communities based on collective ownership rather than their "division" or "liquidation"; that the solution to the question of private initiative in Indian agriculture should be found without damage to the perpetuity of the ancestral community; that this could possibly be achieved by admitting the coexistence of a share in collective ownership and of a small private holding by the same person; that coordination of the fundamental law of an Indian Office with that regulating the activities of the community is desirable. (Lipschütz, 1948, pp. 321-326.) 423 648

Because of the Chilean law regarding inheritance of land, care is now taken, when an Araucanian child's name is recorded in public or permanent records, that the names of parents, too, are recorded. Often, too, today parents insist that records show the father's given name as the child's surname—the father having no surname to give to the child (cf. pp. 40-41). Where no written information is available regarding the child's lineage, as was formerly the case, signatures of persons who know the parentage of a child (now an adult) must be obtained for legal and other documents. Because of this parents often come to the Mission requesting that their names be inserted near their children's in old baptismal records. A 50-year-old woman asked Father Sigifredo, who had known her family for as many years, to sign a Government document testifying to the death of her husband and to the parentage of her 30-year-old son: "My son needs your signature in order to get the land that rightfully belongs to him and that his father wanted him to have." Also the custom of substituting a child's name with a second name during childhood has practically died out; parents have learned that there is less confusion about inheritance if a person is known by only one name during his lifetime. (Cf. pp. 37-38.) [551]

AGRICULTURE AND HORTICULTURE

Informants older than 50 years of age remembered the days when seeds of wild grass were harvested—a time when every family already raised wheat in natural glades. Seeds collected were those of quinoa, yerba vinagrillo, mango, and lauho kachu. An occasional family cultivated quinoa. All these grasses are now nearly extinct. "Maybe you can find lauho on the pampa still; formerly the pampa was overgrown with it. My father-in-law (older than 100 years) told me last evening that when he was young several families would set out to collect quinoa or lauho kachu. Each family took along several pelts of the 222

10: Hilger E-5 (1946-1952) 1957
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[136] Each family took along several pelts of the
[222] Llama—the Llama was an animal that lived around in the Mapuche country then; it was like a sheep, he said, but its pelt was not as heavy as a sheep's. They pulled off the ears of the grain by hand, collected [483] them on the pelts, folded the pelts, and each man carried peltfuls of them home, slung across his shoulder. They collected heads of the wheat in the same way in those days, and we sometimes collect it in the same manner today."

243 A 19-year-old girl in Collaripe collected wheat by this method while I was there. Her family's 1946 stored wheat supply had been depleted, and the grain in the fields was not ready to be harvested—only scattered ears had ripened. The girl walked through the wheat field (pl. 47, *1*), grasped a few ripened ears here and a few there with each hand (little finger toward the earth), broke the ears off the stalk, and when a hand could hold no more, dropped them into a basket which she was carrying on her arm. When the basket was nearly full, she straddled the handle and packed the ears down with both feet, and when it could hold no more, she walked home. There she poured a portion of the ears into a wooden dish, placed the dish on the ground close to a tree trunk, stepped on the grain, supporting herself by clutching the ends of two branches on the trunk of a tree, and threshed the grain with her feet (pl. 47, *2*). Thrashing grain in this manner is called fuwiñpen. The movements of her feet, used alternately for probably three movements, were quick and somewhat rhythmic. With each movement she brought the ears of grain into the middle of the dish by means of her toes and the side of the foot. "When my mother fuwiñpen, she sings a song; I don't know the words, but I can hum the melody." And she did. After some time she emptied the wooden dish into a winnowing tray, shook the tray, and then by brushing the surface with her hand sorted out ears that were not completely threshed. Such ears she threw back into the wooden dish to be threshed. The kernels she poured into a basket (pl. 47, *3*). She then threshed the remainder of the ears. The threshing of the entire harvest was completed in three installments. Next she walked into an open space to winnow the kernels—a place evidently used for that purpose, for chaff and dry pea shells were lying about. She had barely begun to winnow when small pigs came to eat the refuse. Noticing the direction of the wind, she sat on a log with her back toward it, poured kernels onto the winnowing tray, and then with intriguing skill she shook the kernels simultaneously up and down, forward and back, and from side to side, focusing her eyes on the farther edge of the tray where the kernels began to collect as they separated from the chaff. When a goodly number had collected there,

10: Hilger E-5 (1946-1952) 1957
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Chile

252 415 stances. Occasionally a chalwe, like all baskets, is used for storage; chaff-free uncooked wheat and toasted wheat were seen so stored.

Baskets with handles (kilko) (pl. 46, 4) are used for carrying and for storage; trays (lepü) (pls. 44, 2; 46, 3), for winnowing wheat, dried beans, and peas, or "anything that needs to be winnowed."

• 228 262 Cooper writes regarding noncultivated food plants which were part of the Araucanian diet: "The number of distinct species of wild plants exploited, a good many of them intensively, as food sources was very large, totaling probably a good 75 to 100." One of his sources, an Araucanian, listed nearly 50 plants. Among plants listed by Cooper are roots and tubers, rhizomes of a fern, fruits and berries, apples (post-Columbian), nuts, seeds, leaves and greens, mushrooms and algae (1946, p. 702).

In all the areas I visited, non-Araucanian herbalists knew that wild plants formed a substantial part of the Araucanian diet today. Children like to eat fresh berries and uncooked fruits and roots of certain plants, and many were seen at school with teeth blackened from the blue-black fruit of the maqui and the berries of michai and chalaiwa. They also relish the fresh fruit of mitahue, chaura, and chupón. A child will reach into the spiney bush of chupón, get hold of a blade near its roots and pull it out, draw the root end between the teeth to sever the fruit, suck the juice, and spit out the seeds. "Their juice is sweet; just try some." Children are also fond of eating the peeled, uncooked root of the rhubarblike nalca, and the stem, just above the root, of a large fern called helecho grande.

[257] The core and the stem of the helecho grande is dried, ground fine, and boiled in water (or, recently, in milk), and eaten as a thick soup. In Pangipulli, wild plants cooked in meat broth or in stews are green leaves of yuyo and dried powdered flowers of circuellin. Tubers of the wild potato (papa), are sometimes collected, but those of llowi, and of luilfü (not identified) are no longer used. The wild potato is often crossed with cultivated ones by putting pieces or small whole ones of both kinds into each hill. "In another season this mixture produces a large potato, sweeter than the ordinary cultivated one. If the wild potato is planted alone, it does not produce well," said the informant.

222 263 Tunillo, a wild plant, is used as a condiment. So are two cultivated plants borrowed from Chileans—peppermint (yerba buena) and oréganon. The most common condiment is a mixture of salt and chili. Today salt is bought in Chilean stores, but Cotheripe informants remembered when it was obtained from Araucanians who lived where it was found in caves. Families along the Pacific formerly cooked in

10: Hilger E-5 (1946-1952) 1957
SG4 Araucanians SG4
Chile

the salty water of the ocean, and this is still done today, if the household supply of salt has run out. 222 [263]

The nut of the avellano—a tree found in the Andean valleys—is eaten by children; seldom by adults. Everywhere pigs, released from pens, were seen running their snouts through grass under the trees in search of these nuts. "We know where ripe ones are when we see where the pigs are enjoying them," said a little girl. The nuts of the Chilean coniferous pine, known as the araucaria (pl. 37, *3, 4*) have always been a favorite staple food. When the wheat crop is insufficient, "like this year" (1947), said the Collaripe informant, "they are almost a necessity." Families set out for the araucaria groves after the wheat has been harvested. The araucaria is found on the slopes of the Andean Cordillera and on a ridge of the Coastal Range between the rivers Bio Bio and Bueno, at a height of about 3,000 feet. By the time a tree bears cones, it is from 75 to 150 feet tall, and the cones will be far beyond the reach of man. When the kernels have matured, some fall to the ground and others are shaken out of the cones by strong winds. Cones never empty entirely at one time. The greatest harvest, however, will come when the season has so far advanced that the small green parrots, which were a pest when fields and gardens were being seeded, return in flocks. These land on the trees and peck the cones for kernels for their own consumption, causing all the ripened kernels to fall to the ground where they can be gathered by man. If there is an abundance of kernels, those not needed for home consumption are sold to Chilean stores. "Chileans, too, like these nuts." [262]

A 52-year-old Collaripe man told the following regarding araucaria nut harvesting: "The araucaria grow in groves of varying numbers; groves are usually some distance apart; one might be here where I live, another at Lake Pelaifa [40 minutes' walk], another halfway between these two, the next one at Llancahue [an hour's walk], and so on. Up in the Cordillera, just opposite the Volcano Villarrica, there is a grove, and three ruka have been built there; that is where I take my family. In another place not far from there, is another grove with seven ruka. We have built several ruka in each grove, the number depending on the size of the grove. A man may take his family to one of these groves, and find that all the ruka there are already occupied. If there is still room for his family in a ruka already occupied, they may sleep in it, but build their fire and do their cooking outside. If there is no room, the man will find a ruka in another grove. Families do not gather nuts under the same trees each year; anyone can go any place he wishes to. The time to leave home to collect the nuts is when the

10: Hilger E-5 (1946-1952) 1957
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wheat has been harvested, usually this is in April. Strong winds begin at that time; early falling of nuts depends upon the wind. May, too, is a good month, but after May, snows come, and one cannot find the nuts; if not all have been collected because of early snows, they can be gotten in October when the snow melts. Chileans eat the araucaria nut uncooked; very few Mapuche do. Mapuche remove the hulls by roasting the nuts in hot ashes and coals—this causes them to pop out of their hulls—or we boil them in water, after which the hulls are easily removed by hand. If the harvest is large, we roast them and string them and hang them up in the ruka. Later they are boiled and eaten. They are not mixed with anything. They are a rich food, and one cannot eat many at one time. A nut is about so long" (indicating the distance from tip to first knuckle of little finger).

Wild honey is collected from trees and used in sweetening foods, but every household today supplements it with sugar bought in Chilean stores. Quoting a 19-year-old Cofiaripe girl: "My father gets wild honey today like the Mapuche have always gotten it, he told me. On a windy day, he walks among the trees on the mountainsides and looks for a tree around the top of which bees are buzzing. A few steps away from the foot of this tree, in the windward direction, he builds a fire. The wind will take the smoke toward the tree then. Bees cannot tolerate smoke, and so they either fly away, or die. When there are no longer any bees about the tree, he fells it, splits it in halves, lengthwise, removes the honey and brings it home." The girl's mother then told that at home the honey is put into cántaros and is set close to the fire to be thoroughly heated, after which it is set to cool. The wax which collects at the top while it is cooling is removed. If foreign substances, such as leaves and twigs, are seen in the honey—"maybe the man had a difficult time getting the honey, for bees can be mean"—the honey freed of its wax is again thoroughly heated and then strained through a suspended chaiwe from which the honey drips into a container placed below it.

Of cultivated plants wheat is the essential one; it is a basic food in the Araucanian diet. Four traditional dishes are prepared from it: tortillas (chapalcochke), mote (kako kachillo), catuto (moltrun or mol'a), and toasted wheat (kopuwiwa).

Tortillas are made of flour mixed with water, eggs, and salt. A handful of dough is flattened to desired thickness by being tossed from hand to hand and is then baked directly on or in hot ashes at the fireside.

Mote is a favorite dish. "It is exclusively a Mapuche dish," said a woman; "every mother sees to it that all her daughters learn how to

10: Hilger E-5 (1946-1952) 1957
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Chile

water, and when the shells drop off, they are removed and strung on a strand of fiocha for easier handling—"they are very slippery animals." They are then twirled around in hot ashes at the fireplace, and each one is well pounded with a maul or a stone. After this the ashes are washed off and the loko is either fried in deep fat, roasted directly on hot coals, or cooked as stew. If a larger number has been collected than can be eaten at one meal, the surplus, after having been ashed and pounded, is either still fresh to non-Araucanians or is prepared for drying for future use. In both cases stringing must be more carefully done to preserve them: the round end of one loko must touch the narrow end of the one next to it, which is tipped with a hard shell-like substance; if round ends touch each other they will pack and spoil. So strung, they are hung on the raft of the fireplace to dry. Araucanians will eat them cooked in stews. Non-Araucanians serve them in several ways: deep fried, cut into small pieces and cooked with vegetables as stews, chopped fine in empanadas, or pickled in vinegar and onions and served as an entrée. 252

Mañihue are sometimes baked in the shell in the fireplace; more often they are boiled in water until they leave the shell. Being tender, they need not be pounded like the loko. If eaten immediately, they are deep fried or cooked as stew; if not, they are prepared and dried in the same manner as the loko. An Araucanian family gave shelter one stormy night to my interpreter and a companion, both non-Araucanians away from home. For their evening meal the woman in the ruka fed them mañihue. "The little heads with the horns had not been removed," commented the interpreter. "My companion said those little horned heads nauseated her. I insisted, 'We must eat them or we may offend these people.' But she managed to pinch them off and slip them to the cat."

Ariao are baked in their shell in contact with hot coals. When well done, the upper part of the shell is cut off, and the substance eaten from the remaining shell. Piure are eaten from the shell, also. They are either baked on hot coals or well boiled in water. "Piure are very good to eat," said a little girl; "they have sea water inside of themselves. They are a pretty color, too, after they are boiled."

Seaweeds used as food by families living near the Pacific are luche and cochayuyo. Luche grows to a height of about a inches on the tops of rocks close to the shores of the Pacific. "It looks as though it had been sewed there." It is easily pulled off and is collected when the tide is low. It is prepared for eating by rolling it into leaves of nalca to form small bundles. Each bundle is tied tight with strands of fiocha, then put into a shallow hole made outside the ruka, covered [221 262]

10: Hilger E-5 (1946-1952) 1957
SG4 Araucanians SG4
Argentina

lagoon in the River Negro," said another old man. "I went there one time with others, when I was young, and we brought home sackfuls on horseback. Sacks were of hide then. That was long before there were any trucks in this area." 263 317

In the early days grease was used less frequently than it is today. Any animal fat may be used, but horse grease is a favorite. 262

Eggs of chicken and waterfowl were eaten raw or cooked. If raw, they were either sucked through an opening at one end of the shell or the shell was completely emptied into the mouth at one time. Today, chicken eggs are eaten raw, scrambled, fried in grease, or cooked in an empty rhea eggshell—as many as a dozen chicken eggs can be cooked in such a shell. 252

Rhea eggs were, and are today, scrambled in their shells and then cooked in them. One end of the shell is peeled off, the yolk and white stirred into a mixture with a stick, and salt added to one's taste. The shell is then set close to the edge of the fire, and either the contents stirred with a little stick at intervals or the shell repeatedly turned to insure thorough cooking. "A well-cooked rhea egg is delicious, but it takes a long time to cook one," said an old woman. "When our men return from sheep shearing—they are now shearing them on the estancias—they will bring with them some rhea eggs." She then told the following: *"People look for rhea nests today in fenced-in areas* on estancias; it is not difficult to find a nest, but it is difficult to get the eggs. There may be as many as 30 eggs in a nest. A nest is about so big [2½ feet in diameter]. Let us say a man is riding around on horseback looking for a nest. If he is not alert, he may come upon one before he knows it. Now, let us say the rhea is off the nest feeding—you know it is the male that hatches the eggs; but the female is always close by. The rhea sees the man on horseback come close to his nest. He will become so angry that he will run at full speed against the man's horse, either throwing the horse down or frightening it into a dangerous runaway. Should it happen that the male bird be on the nest when the rider gets near it, he will kick the eggs in all directions to break them. The male rhea has a bad temper. The only time a person can pick up an egg is when he is on foot and only while the male is a little distance away finding food for himself." She added that in every nest there is a small unfertilized egg which was laid last. As soon as the eggs are hatched the female takes over. She picks open the unfertilized egg, which by now has rotted, and lets it ooze. Flies soon come to feed on it, and they form the first food of the young rhea. 252 825 [222]

Wild grains used as food in the early days were quinoa and wild 262

10: Hilger E-5 (1946-1952) 1957
SG4 Araucanians SG4
Argentina

to settle. The water that collected was poured off and handfuls of the potatoes squeezed to free them of any remaining water. The mass was then eaten either raw or slightly cooked. 252

Nuts from the cones of the araucaria (pl. 72, 3) were a staple food for families who lived where the tree grows. Families from other areas, too, migrated annually to collect them for their own consumption. Today families collect them for sale—at the time the present study was being made, several Quilaquina families went to Chinquilihuen to do so. "They pick kilos of them; we buy them from these people." Large groves of the araucaria are still found in Pulmari between Lake Tromen and the Magdalena Valley, and in the areas surrounding Lake Aluminé, Lake Huechulafquen, and Lake Curruhue Grande. Small groves and scattered trees are found at Lake Meliquina and Lake Carmen. The tree bears its first nuts when about 25 years old, and it takes 2 years for them to ripen. The nuts, white and almondlike and nearly the size of dates, are either roasted or cooked in meat stews. To roast them they are strung on a thread of sinew and hung at a little distance over the fire. In days when they were used as food by all families they were dried in sun and air and stored for future use. [222 262]

Wild apples (manzana silvestre) were dried on racks over fireplaces and then eaten both cooked and uncooked. This custom prevails today. *An extra supply is stored.* [222]

Among implements used in preparing and serving food in the early days were ollas, cántaros, metates and manos, mortars and pestles, plates and bowls, cups, knives, pichañas, spoons, lupe, baskets, and winnowing trays. 415

Ollas (challa), large-mouthed pieces of pottery, were sufficiently fired to be used in cooking. They could be placed directly in the flames of the fireplace; not so cántaros. Cántaros (metawe, pl. 76, 1), large, narrow-mouthed pottery pitchers with one or two handles, were only sufficiently fired to be set in hot ashes or at the edge of the fire. Food could be simmered but not cooked in them. Cántaros were also used for storing food and for carrying and storing water. Ollas were always plain; cántaros sometimes resembled animals and were decorated. A pig-shaped, blackish-colored cántaro (pl. 76, 1) found in a grave in Pulmarí, and now in the collection of Parque Nacional de Lanín in San Martín de los Andes, is 8 inches high, 7½ inches at greatest width, and 4 inches in diameter at the opening. A duck-shaped one (pl. 76, 1), found in a grave in Huechulafquen, is 7 inches high, 7½ inches at greatest width, and 3 inches in diameter at the opening. [415 172]

In 1930 workmen building a road found approximately 50 cántaros

11:Faron E-5 (1952-1954)1961 SG4 Araucanians SG4
Mapuche

RESERVATIONS

It is certain from the earliest historical reports that the Mapuche were horticulturalists, and that they had many llamas. It seems that their economy was one of sufficiency, although the fact that they utilized such a large number of wild plants might attest to a lack of variety in farmed produce or recurring times of scarcity. But we know nothing of the extent to which wild plants were used or, indeed, if there was not a much greater dependence upon them only after the turbulent period of continual Spanish-Mapuche warfare got under way.

Cooper (1946:700) lists more than twelve different food plants which were grown before the arrival of the Spaniards in central Chile. Most of these crops had a general Andean distribution, and included maize, potatoes, beans, squash, chili peppers, quinoa, oca, and several seed plants resembling barley. These crops are still grown by the Mapuche, although oca and quinoa are raised in very small amounts and have a spotty and limited distribution. Of all these plants, maize and potatoes (mainly Western varieties) have most importance today, but wheat, oats, barley (very little rye), and beans, peas, and garden vegetables such as onions and tomatoes have been added to the Mapuche inventory. They have been grown in increasingly greater amounts since the reservation system was instituted.

It is misleading to think of the aboriginal Mapuche as field farmers, since the equipment for this sort of cultivation was not available to them until during the colonial period. Small gardens and desultory cultivation were consonant with small, shifting population aggregates. Field farming was introduced with oxen, as it was throughout Chile. Field cultivation, as distinguished from garden horticulture, seems only to have been in evidence where contacts with Spaniards were sustained. Even today, a Mapuche farmer unable to avail himself of a plough and oxen plants only a garden of maize, beans, and other vegetables by means of a hoe and dibble. Not until the nineteenth century do accounts of Mapuche agriculture convincingly describe field farming. It is likely that during most of the troubled colonial period, the Mapuche remained small-scale cultivators, depending also on wild plants and the meat of horses, cattle, sheep, llamas, and guinea pigs to supplement their crops.

In prereservation times horticulture was essentially woman's occupation. The male role was that of warrior. It required fighting fit-

11:Faron E-5 (1952-1954)1961 SG4 Araucanians SG4
Mapuche

Of a total of 293 hectares, approximately 180 are cultivated, 90 are *vega* and woodland utilizable as pasturage, and the rest either *vega* that is too swampy for use or land bordering the newly built railroad spur line which cuts through the *baja* land from the north-northeast. More than half the land is *altura,* but the ratio of *vega* and woodland to cleared *baja* is about 2:1, leaving less than three-quarters of the total land available for agriculture under present conditions.

There is greater diversity in land types than is found on Alonqueo, where most land is *altura* and the *vega* that exists is suitable for pasturing cattle most of the year. On Llancaman and in the Toltén region as a whole there is a continual rotation of crops rather than a fallow period of several years. Some Mapuche allow land to rest, but the pattern is to rotate crops rather than fields. Potatoes, oats, and wheat are grown in successive years on *altura.* In the *baja,* potatoes and barley are rotated, sometimes along with peas. Wheat does not grow well in the wet clayey soil of this region. Potatoes used to be the principal crop until about five years ago, when they suffered a blight which was still rampant in 1953-54. Barley is grown in about the same amount as wheat, and farther north and almost directly on the coast, there are several reservations that experimented with linseed some years ago and today raise this crop almost exclusively for market. Crop yields on some reservations in the Pelehue region are higher than in the Roble Huacho region. While returns are not equal to those on better Chilean farms, they approximate the provincial minimum average, that is, they are in the ratio of about 5 or 6:1 and are said to have reached 15:1, which approximates the provincial maximum average.

The Indians on Llancaman have 93 cattle, 27 horses, and 234 sheep, in addition to pigs, chickens, and some geese. Many more of these animals are held in half-shares than is the case on reservation Alonqueo. This is partly because there is more natural pasturage available on Llancaman, but it is also because the reservation is less wealthy.

A generation ago more cattle used to be raised than now. Before the *radicación,* cattle and sheep were far more important than crops in the native diet, with the exception of potatoes. In those days agricultural production was not as varied as it is today, potatoes being the principal field crop. There was very little wheat, oats, and *chacarería,* and almost no barley grown. Many wild plants were gathered. Some use was made of fish from the Toltén River, but ocean resources were not tapped.

2: Musters T-5 (1869-1870)1873
SH5 Tehuelche SH5
Araucanians SG4

We remained some days in Diplaik, during which several races were run, resulting on this occasion in favour of the horses of the Araucanians, who won many horses and mares from their neighbours.

The international sports were diversified by a cock fight between Orkeke's bird, and one belonging to an Araucanian. My assistance was requested to sharpen the spurs, and my friends were much astonished at my indignant refusal to have anything to do with such a proceeding. The Araucanian owner of the cock had also a hen which, during the march, sat upon a clutch of eggs and successfully reared her brood of six chickens, the hen, nest, and all being carefully transported on horseback, and Dame Partlet seeming quite as much at home in the saddle as any Indian mother with her nursling carried in the cradle behind her.

In the dry lagoons on the western side of the valley the women, and indeed sometimes the men, were frequently engaged in grubbing up an edible root which grew in large quantities. The leaf of the plant is very minute, and the root, which is found about a foot below the surface, varies in length from one to three inches: it is quite white, and about a quarter of an inch in diameter; when raw its taste resembles that of a chestnut, but is rather sweeter. The Indians boil it and drink the water, which is very sweet. During the last two days of our stay we subsisted entirely on this food and fish caught in the stream, as meat was not obtainable. Some of the Tehuelches were here induced for the first time to taste the fish on which Casimiro, Meña, and myself were regaling, and some of them took a great liking to it, and borrowing my lines and hooks were soon sitting on the bank waiting patiently for a bite. They caught several, and towards evening returned with my lines and a share of the fish for us, which we did not require. As I had plenty of hooks, these ingenious savages soon made lines for themselves out of twisted ostrich sinews, and may, for all I know, at the present time be occupied in fishing. The fact that none of these

2: Musters T-5 (1869-1870)1873
SH5 Tehuelche SH5
Araucanians 564

Tehuelche friends. The gloriously warm weather, which, for a wonder, continued during our stay at Lilly-haik, as this station was named, rendered our residence there most enjoyable, and we revelled in the simple pleasures of the woods; sometimes three or four of us would go across the brook, and traversing a plain occupied by the horses and cattle, search for strawberries amongst the ravines of the neighbouring mountains, or climb the tall trees and gather the yellow insipid fungus adhering to the branches, or lie down amongst the wild violets and enjoy the *dolce far niente*. These Indian children of nature showed themselves as thoroughly able to appreciate the idleness of gathering fruit and flowers and roaming in the woods as school children on a holiday ramble. On one occasion Casimiro and several others proceeded in search of wood wherewith to construct saddles, and we felled several fine trees, selecting and cutting off suitable pieces of timber. It was hard work with blunt axes, but Indians are indefatigable when they once commence a task. After my spell at the axe I wandered off with a companion into the thicker forest in search of fungus to make tinder. Of this we found little, but thirst soon made us seek for water, and discover a delicious ice-cold rivulet, embowered with currant bushes bearing ripe fruit. Here we remained a short time smoking and picking currants, recumbent on the mossy turf, till a shout in the distance warned us that our companions were returning. On our way home we killed one of the flat toad-like lizards which the Indians regard as devilish; we also caught a young skunk, which Casimiro wished to keep as a pet for the children, but at my instance let it go and enjoy the delights of freedom. 'Fancy a tame skunk!' some may exclaim; but in Hinchel's toldo there were two skunks which, perfectly tame and as playful as kittens, ran about everywhere, never using their offensive powers, and sometimes getting lost for an hour or two caused a dreadful outcry to be raised by the children until they were found.

The hill slopes were a garden of calceolarias, alyssum, tiny